UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Santa Clara County Department of Environmental Health (County)	Address: 1555 Berger Drive, Suite 300 San Jose, CA 95112-2716
Agency Caseworker: Aaron Costa	Case No: 06S1W34R01f

Case Information

USTCF Claim No.: 7630	Global ID: T0608500280
Site Name: Byington Steel	Site Address: 1225 Memorex Drive Santa Clara, CA 95050
Responsible Party: Byington Steel Treating Attn: Rod Bravo	Address: 1225 Memorex Drive Santa Clara, CA 95050
USTCF Expenditures to Date: $106,204	Number of Years Case Open: 26

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0608500280

Summary

The Low-Threat Underground Storage Tank (UST) Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Policy. This case meets all of the required criteria of the Policy. A summary evaluation of compliance with the Policy is shown in **Attachment 1: Compliance with State Water Board Policies and State Law**. The Conceptual Site Model upon which the evaluation of the case has been made is described in **Attachment 2: Summary of Basic Case Information (Conceptual Site Model).** Highlights of the case follow:

This case involves an active steel treating facility. An unauthorized release was reported in July 1986 following the removal of one 500-gallon gasoline UST. An additional 550-gallon diesel UST was discovered in May 2011 and removed. Since the removal of the USTs, petroleum fuel contaminant concentrations have been naturally attenuating. No active remediation has been conducted. Since 1999, six monitoring wells were installed and sampled regularly. According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents.

The petroleum release is limited to the shallow soil and groundwater. According to data available in GeoTracker, there are no supply wells regulated by the California Department of Public Health or surface water bodies within 1,000 feet of the defined plume boundary. No other water supply wells have been identified within 1,000 feet of the defined plume boundary in files reviewed. Water is provided to water users near the Site by the Santa Clara Valley Water District. The affected groundwater is not currently being used as a source of drinking water, and it is unlikely that the affected groundwater will be used as a source of drinking water in the foreseeable future. Other designated beneficial uses of impacted groundwater are not threatened and it is highly unlikely that they will be, considering these factors in the context of the site setting.

Remaining petroleum hydrocarbon constituents are limited and stable, and concentrations are decreasing. Corrective actions have been implemented and additional corrective actions are not necessary. Any remaining petroleum hydrocarbon constituents do not pose a significant risk to human health, safety or the environment.

Rationale for Closure under the Policy

- General Criteria: The case meets all eight Policy general criteria.
- Groundwater Specific Criteria: The case meets Policy Criterion 1 by Class 1. The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product. The nearest water supply well or surface water body is greater than 250 feet from the defined plume boundary.
- Vapor Intrusion to Indoor Air: The case meets Policy Criterion 2b. Although no document titled "Risk Assessment" was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to petroleum constituents was performed by Fund staff. The assessment found that there is no significant risk of vapor intrusion to indoor air adversely affecting human health. The onsite building is an active steel treating facility with multiple rollup doors that would prevent the accumulation of soil vapors in the building. Therefore, the pathway is incomplete. In addition, as an active steel treating facility, there would adequate air exchange provided by the building's ventilation system.
- Direct Contact and Outdoor Air Exposure: This case meets Policy Criterion 2b. Although no document titled "Risk Assessment" was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to petroleum constituents was performed by Fund staff. The assessment found that maximum concentrations of petroleum constituents remaining in the soil will have no significant risk of adversely affecting human health. The USTs and source removal occurred by excavation to depths of 10 to 15 feet below grade. In addition, the Site is paved and accidental exposure to site soils is prevented. As an active steel treating facility, any construction worker working at the Site will be prepared for exposure in their normal daily work.

Objections to Closure and Responses

In correspondence dated October 25, 2013, Santa Clara County made reference to the State Water Board Low-Threat Closure Policy validation process in support of not closing this case at this time. In objecting to closure, two issues have been raised:

COMMENT 1: Secondary source has not been removed to the extent practicable.
RESPONSE: During removal of 500-gallon gasoline UST in July 1987, the soil was excavated to a depth of 10 to 14 feet below ground surface (bgs). In addition, a soil sample collected from the bottom of the excavation reportedly did not contain detectable concentrations of TPHg. Furthermore, the absence of significant gasoline constituents in groundwater even though the depth to groundwater ranges between 5 to 7 feet bgs further demonstrates that secondary source has been removed to the extent practicable.
COMMENT 2: A conceptual site model that assesses the nature, extent and mobility of the release has not been developed.
RESPONSE: A conceptual site model that assesses the nature, extent and mobility of the release has been fully developed and demonstrate that the case meets the Policy. The supporting data and analysis used to develop the conceptual site model are not required to be contained in a single report.

COMMENT 3: The 1986 tank removal report included soil data for the upper five (5) feet at 120 mg/kg Total Petroleum Hydrocarbons (TPH).

- RESPONSE: The case meets Policy Criterion 2b. Although no document titled "Risk Assessment" was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to petroleum constituents was performed by Fund staff. The assessment found that there is no significant risk of vapor intrusion to indoor air adversely affecting human health. The onsite building is an active steel treating facility with multiple rollup doors that would prevent the accumulation of soil vapors in the building. Therefore, the pathway is incomplete. In addition, as an active steel treating facility, there would adequate air exchange provided by the building's ventilation system.
  COMMENT 4: The County points out that no formal risk assessment has been prepared. If a professional assessment of site-specific risk has been prepared a copy is requested.
  RESPONSE: This case meets Policy Criterion 2b. Although no document titled "Risk Assessment" was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to petroleum constituents was performed by Fund staff. The assessment found that maximum concentrations of petroleum constituents remaining in the soil will have no significant risk of adversely affecting human health. The USTs and source removal occurred by excavation to depths of 10 to 14 feet below grade. In addition, the Site is paved and accidental exposure to site soils is prevented. As an active steel treating facility, any construction worker working at the Site will be prepared for exposure in their normal daily work.

Determination
Based on the review performed in accordance with Health & Safety Code Section 25299.39.2 subdivision (a), the Fund Manager has determined that closure of the case is appropriate.

Recommendation for Closure
Based on available information, residual petroleum hydrocarbons at the Site do not pose a significant risk to human health, safety, or the environment, and the case meets the requirements of the Policy. Accordingly, the Fund Manager recommends that the case be closed. The State Water Board is conducting public notification as required by the Policy. San Bernardino County has the regulatory responsibility to supervise the abandonment of monitoring wells.

Lisa Babcock
Lisa Babcock, P.G. 3939, C.E.G. 1235

6/1/14
Date

Prepared by: Walter Bahm

ATTACHMENT 1: COMPLIANCE WITH STATE WATER BOARD POLICIES AND STATE LAW

The case complies with the State Water Resources Control Board policies and state law. Section 25296.10 of the Health and Safety Code requires that sites be cleaned up to protect human health, safety, and the environment. Based on available information, any residual petroleum constituents at the site do not pose significant risk to human health, safety, or the environment.

The case complies with the requirements of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.[1]

Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations? The corrective action provisions contained in Chapter 6.7 of the Health and Safety Code and the implementing regulations govern the entire corrective action process at leaking UST sites. If it is determined, at any stage in the corrective action process, that UST site closure is appropriate, further compliance with corrective action requirements is not necessary. Corrective action at this site has been consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations and, since this case meets applicable case-closure requirements, further corrective action is not necessary, unless the activity is necessary for case closure.	☒ Yes ☐ No
Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this case?	☐ Yes ☒ No
If so, was the corrective action performed consistent with any order?	☐ Yes ☐ No ☒ NA
General Criteria General criteria that must be satisfied by all candidate sites:	
Is the unauthorized release located within the service area of a public water system?	☒ Yes ☐ No
Does the unauthorized release consist only of petroleum?	☒ Yes ☐ No
Has the unauthorized ("primary") release from the UST system been stopped?	☒ Yes ☐ No
Has free product been removed to the maximum extent practicable?	☐ Yes ☐ No ☒ NA
Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?	☒ Yes ☐ No

[1] Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.

Has secondary source been removed to the extent practicable?	☒ Yes ☐ No
Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?	☒ Yes ☐ No
Nuisance as defined by Water Code section 13050 does not exist at the site?	☒ Yes ☐ No
Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?	☐ Yes ☒ No
Media-Specific Criteria Candidate sites must satisfy all three of these media-specific criteria: **1. Groundwater:** To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites:	
Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?	☒ Yes ☐ No ☐ NA
Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites? If YES, check applicable class: ☒ **1** ☐ **2** ☐ **3** ☐ **4** ☐ **5**	☒ Yes ☐ No ☐ NA
For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?	☐ Yes ☐ No ☒ NA
2. Petroleum Vapor Intrusion to Indoor Air: The site is considered low-threat for vapor intrusion to indoor air if site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies.	
Is the site an active commercial petroleum fueling facility? Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk.	☐ Yes ☒ No
a. Do site-specific conditions at the release site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4? If YES, check applicable scenarios: ☐ **1** ☐ **2** ☒ **3** ☐ **4**	☒ Yes ☐ No ☐ NA

b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?	☐ Yes ☐ No ☒ NA
c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?	☐ Yes ☐ No ☒ NA
3. Direct Contact and Outdoor Air Exposure: The site is considered low-threat for direct contact and outdoor air exposure if site-specific conditions satisfy one of the three classes of sites (a through c).	
a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?	☐ Yes ☐ No ☒ NA
b. Are maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?	☒ Yes ☐ No ☐ NA
c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?	☐ Yes ☐ No ☒ NA

ATTACHMENT 2: SUMMARY OF BASIC CASE INFORMATION (Conceptual Site Model)

Site Location/History

- The Site is a steel treating facility and is bounded by commercial properties to the west, north and east.
- Site maps showing the location of the former USTs, monitoring wells, and groundwater level contours is provided at the end of this review summary. Nature of Contaminants of Concern: Petroleum hydrocarbons.
- Source: UST system.
- Date reported: July 1987
- Status of Release: USTs removed.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1	500	Gasoline	Removed	August 1986
2	550	Diesel	Removed	May 2011

Tank 1 located at 1225 Memorex Drive
Tank 2 located at 1185 Memorex Drive

Receptors

- GW Basin: Santa Clara Valley – Santa Clara.
- Beneficial Uses: San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Basin Plan lists municipal, domestic supply, agricultural, and industrial service and process supply.
- Land Use Designation: Commercial / Industrial.
- Public Water System: Santa Clara Valley Water District
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no public supply wells regulated by the California Department of Public Health within 1,000 feet of the defined plume boundary. No other water supply wells were identified within 1,000 feet of the defined plume boundary in the files reviewed.
- Distance to Nearest Surface Water: There is no identified water body within 1,000 feet of the defined plume boundary.

Geology/Hydrogeology

- Stratigraphy: Lithology shows a generally fining-upward sequence with high plasticity clays (CH) underlying the Site to depths ranging from 11 to 14 feet (bgs). Sandy silts (ML) and silty sands (SM) were observed at depths of 11 to 20 feet bgs, and waterbearing sands (SP/SW) were encountered at depths ranging from approximately 14 to 20 feet bgs and were observed continuously to the bottoms of the borings.
- Maximum Sample Depth: 25 feet bgs.
- Minimum Groundwater Depth: 5.13 feet bgs at monitoring well MW-6.
- Maximum Groundwater Depth: 8.00 feet bgs at monitoring well MW-3.
- Current Average Depth to Groundwater: Approximately 6 feet bgs.
- Saturated Zones(s) Studied: Approximately 5–25 feet bgs.
- Appropriate Screen Interval: Yes.
- Groundwater Flow Direction: North at 0.006 feet per foot (December 2012).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (12/19/12)
MW-1	December 1999	7-22	6.12
MW-2	December 1999	7-22	6.50
MW-3	December 1999	7-22	6.91
MW-4	July 2002	6-25	6.51
MW-5	July 2002	6-25	6.40
MW-6	July 2002	6-25	5.56

Remedial Action

- Free Product: None reported in GeoTracker.
- Soil Excavation: An unknown volume of contaminated soil was excavated, removed, and replaced with clean fill.
- In-Situ Soil Remediation: None conducted.
- Groundwater Remediation: None conducted.

Most Recent Concentrations of Petroleum Constituents in Soil

Constituent	Maximum 0-5 feet bgs [mg/kg (date)]	Maximum 5-10 feet bgs [mg/kg (date)]
Benzene	NA	0.23 (05/27/11)
Ethylbenzene	NA	1.7 (05/27/11)
Naphthalene	NA	0.0047 (05/27/11)
PAHs	NA	NA

mg/kg: milligrams per kilogram, parts per million
NA: Not Analyzed, Not Applicable or Data Not Available
<: Not detected at or above stated reporting limit
PAHs: Polycyclic aromatic hydrocarbons
*Excavation was replaced with clean fill material.

Most Recent Concentrations of Petroleum Constituents in Groundwater

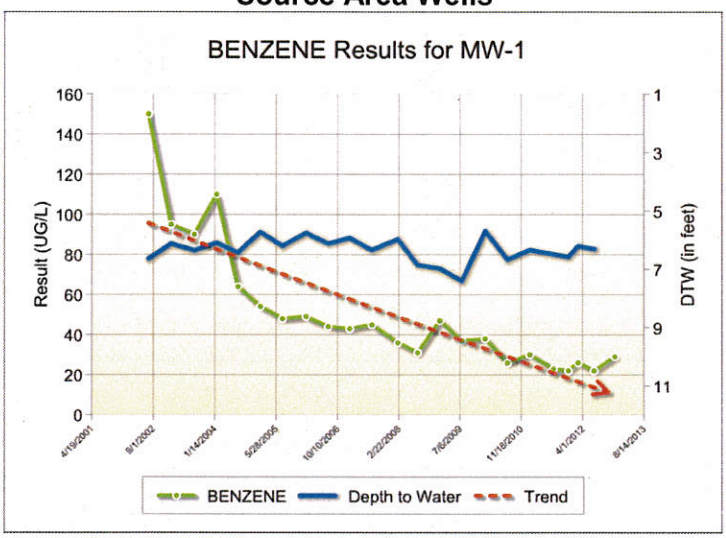
Sample	Sample Date	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-1	12/19/12	2,300	420	**29**	54	84	45.3	<2
MW-2	12/19/12	1,500	1,400	**11**	<0.5	16	6.8	<2
MW-3	12/19/12	740	68	<0.5	<0.5	0.93	1.15	<2
MW-4	12/19/12	370	<50	<0.5	35	<0.5	0.57	<2
MW-5	12/19/12	270	<50	<0.5	<0.5	<0.5	<0.5	<2
MW-6	12/19/12	1,700	280	<0.5	<0.5	<0.5	<0.5	<2
WQOs	-	--	--	**1**	**150**	**300**	**1,750**	**5[a]**

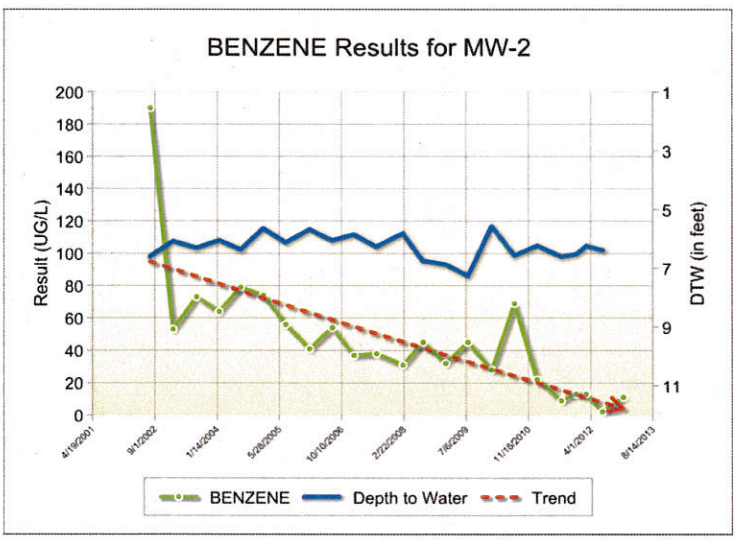
NA: Not Analyzed, Not Applicable or Data Not Available
µg/L: micrograms per liter, parts per billion
TPHg: Total petroleum hydrocarbons as gasoline
TPHd: Total petroleum hydrocarbons as diesel
MTBE: Methyl tert-butyl ether
WQOs: Water Quality Objectives, Regional Water Board Basin Plan
--: Regional Water Board Basin Plan does not have a numeric water quality objective for TPHg and TPHd
[a]: Secondary maximum contaminant level (MCL)

Groundwater Trends:

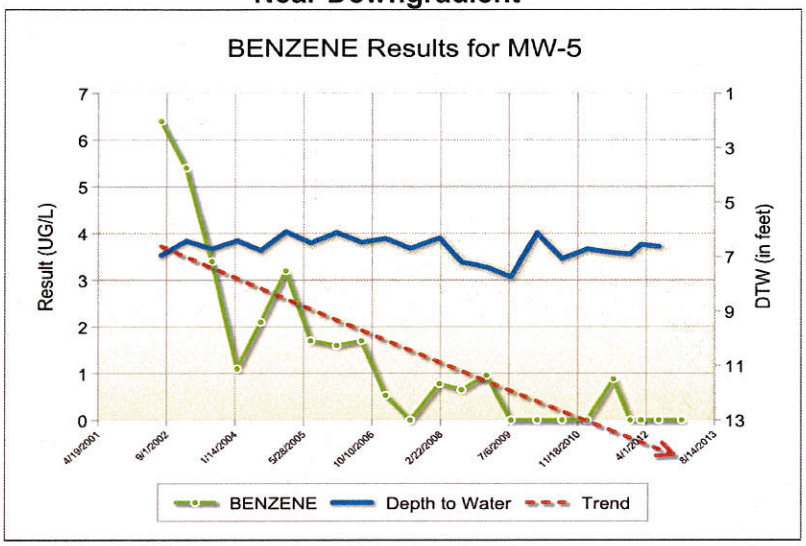
- Groundwater monitoring has been conducted since 1999. Benzene trends are shown below: Source Area (MW-1 and MW-2), Near Downgradient (MW-5), and Far Downgradient (MW-3).

Source Area Wells

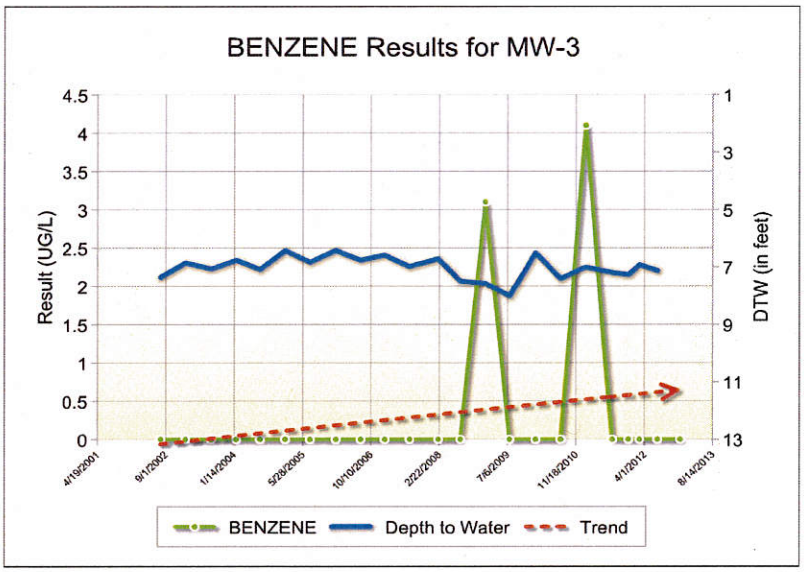




Near Downgradient



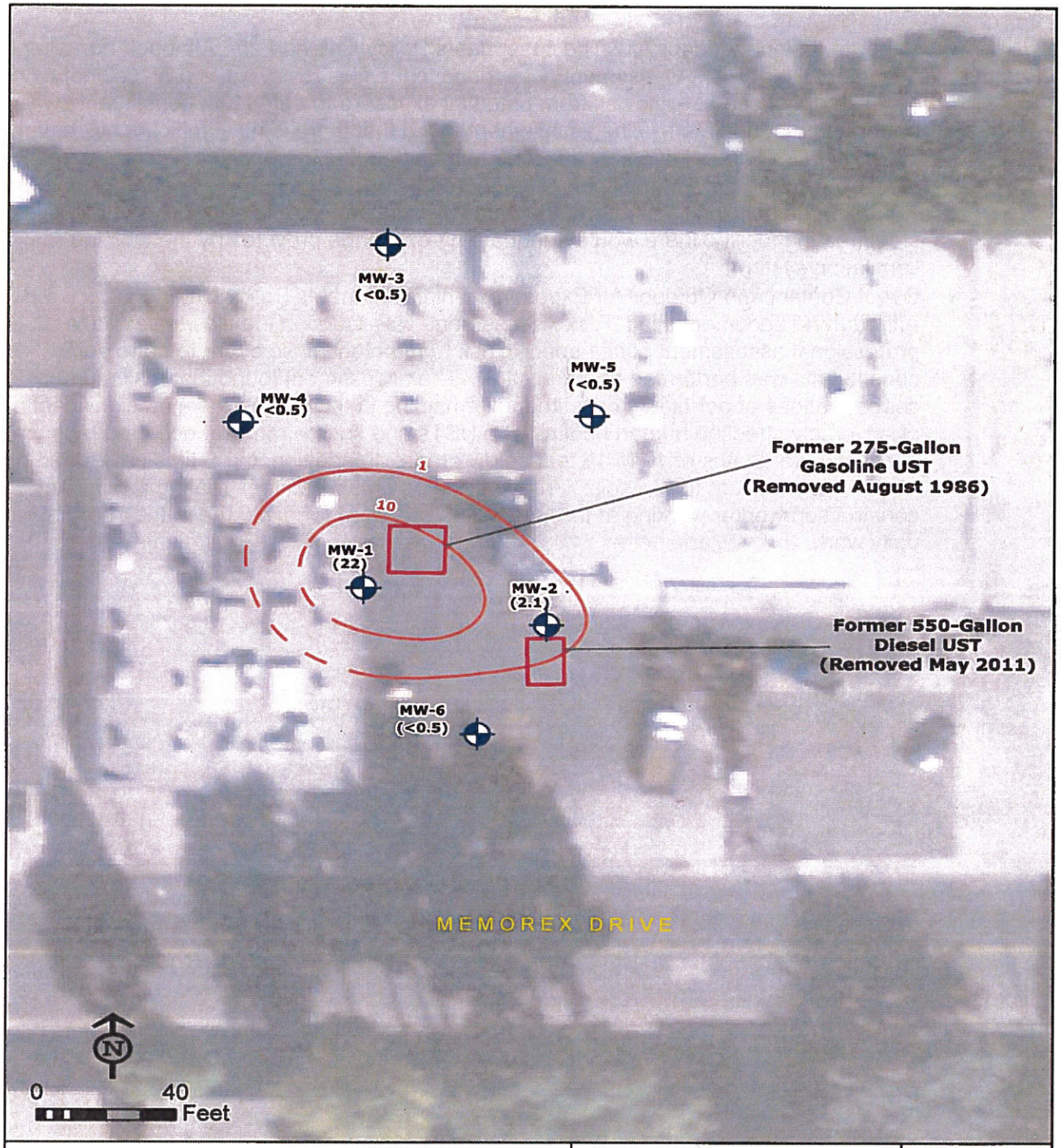
Far Downgradient



Evaluation of Current Risks

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/ Groundwater tested for methyl tert-butyl ether (MTBE): Yes.
- Plume Length: <100 feet.
- Plume Stable or Decreasing: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Groundwater Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 1 by Class 1. The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product. The nearest water supply well or surface water body is greater than 250 feet from the defined plume boundary.

- Vapor Intrusion to Indoor Air: The case meets Policy Criterion 2b. Although no document titled "Risk Assessment" was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to petroleum constituents was performed by Fund staff. The assessment found that there is no significant risk of vapor intrusion to indoor air adversely affecting human health. The onsite building is an active steel treating facility with multiple rollup doors that would prevent the accumulation of soil vapors in the building. Therefore, the pathway is incomplete. In addition, as an active steel treating facility, there would adequate air exchange provided by the building's ventilation system.
- Direct Contact and Outdoor Air Exposure: This case meets Policy Criterion 2b. Although no document titled "Risk Assessment" was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to petroleum constituents was performed by Fund staff. The assessment found that maximum concentrations of petroleum constituents remaining in the soil will have no significant risk of adversely affecting human health. The USTs and source removal occurred by excavation to depths of 10 to 15 feet below grade. In addition, the Site is paved and accidental exposure to site soils is prevented. As an active steel treating facility, any construction worker working at the Site will be prepared for exposure in their normal daily work.



1 Benzene Iso-Concentration Contours (Dashed Where Inferred) Approximate Feature Location	Monitor Wells (13) Concentration in µg/L	**Benzene Iso-Concentration Map** (July 3, 2012) 1225 Memorex Drive, Santa Clara, CA	Figure 4 ers

Environmental Risk Specialties Corporation